

## ABSTRACT

A method and apparatus that allows additional contact pads to be added to a package to support debug and test operations is disclosed. In a preferred embodiment, a circuit board apparatus includes a semiconductor package and an interposer for receiving the semiconductor package. The semiconductor package preferably includes a substrate having a matrix of conductive contact pads on both the top and bottom surfaces of the substrate. The interposer preferably includes a body having a matrix of interposer contact bumps on both the inner and outer surfaces of the body. Each interposer contact bump preferably includes a metal coating and is shaped to abut a contact pad of the semiconductor package.